



Listing of the Claims:

Claim 1 (Original): A novel polymer support for solid phase peptide synthesis comprising polystyrene backbone and propoxylate function of hexanedioldiacrylate crosslinks having optimum hydrophilic/hydrophobic balances.

Claim 2 (Original): A polymer support as claimed in claim 1 wherein the said support has high coupling efficiency and it also suppresses β -sheet formation.

Claim 3 (Original): The polymer support as claimed in claim 1, wherein the polymer is HDPA-PS.

Claim 4 (Original): The polymer support as claimed in claim 1, shows effective swelling in polar and non-polar solvents and stable enough to withstand all vigorous peptide synthetic conditions.

Claim 5 (Withdrawn) A process for preparing the novel polymer support as claimed in claim 1 comprising the step of:

subjecting a monomer and a crosslinker to a step of a suspension polymerization using initiator;

adding a definite amount of diluent to the said suspension polymerization mixture to obtain a organic mixture;

dispersing the said organic mixture in to a polar dispersion medium containing 0.5-1.9% of a stabilizer,

agitating the said organic mixture mechanically to obtain the polymer in the form of beads.

Claim 6 (Withdrawn): A process as claimed in claim 5 wherein the reaction was carried out at 75 to 90°C for 5 to 8 hours.

Claim 7 (Withdrawn): The process as claimed in claim 5, wherein the monomer used is styrene.

Claim 8 (Withdrawn): The process as claimed in claim 5 wherein the crosslinker used is hexanediolpropoxylate diacrylate.

Claim 9 (Withdrawn): The process as claimed in claim 5 wherein the initiator used in benzoyl peroxide and the diluent used is toluene.

Claim 10 (Withdrawn): The process as claimed in claim 5 wherein the size of the polymer was controlled by the speed of rotation.

Claim 11 (Withdrawn): The process as claim in claim 5 wherein the polymer support HDP-PS under goes the step of chloromethylation for introducing chloromethyl group to the said support, followed by the step of hydrazinolysis to convert the chloromethyl group to amino group.

Claim 12 (Withdrawn): The process as claimed in claim 11 wherein the step of chloromethylation is done by using chloromethylmethylether in the presence of Lewis acid catalyst.

Claim 13 (Withdrawn): The process as claimed in claim 11 wherein the step of hydrazinolysis is conducted by using potassium phthalimide followed by hydrazine hydrate.

Claim 14 (New): The polymer as claimed in claim 1 wherein said polymer is prepared in bead form by suspension polymerization using styrene and said crosslinker, diluent as toluene and initiator as benzoyl peroxide in presence of a stabilizer in the ratio of 0.5 to 1.9%.

Claim 15 (New): The polymer as claimed in claim 5, wherein polymerization is carried out at 75-90°C for 5-8 hours.

Claim 16 (New): The polymer as claimed in claim 5, wherein the size of the said polymer was controlled by speed of rotation.

Claim 17 (New): The polymer as claimed in claim 1, wherein functionalization is carried out by chloromethylation for introducing chloromethyl group to the said support, followed by the step of hydrazinolysis to convert the chloromethyl group to amino group.

Claim 18 (New): The polymer as claimed in claim 1, wherein chloromethylation is done by using chloromethylmethylether in presence of Lewis acid catalyst and the step of hydrazinolysis is conducted by using potassium phthalimide followed by hydrazine hydrate.